

REMARKS/ARGUMENTS

In response to the Office Action mailed November 14, 2007, Applicant amends his application and requests continued examination. In this Amendment, no claims are cancelled and new claims 11-15 are added so that claims 1-4 and 9-15 are now pending.

The present patent application describes a wireless heart rate monitoring system intended for consumer use. As depicted in Figure 1, schematically illustrated in Figure 2, and described in the paragraph beginning at page 6 in line 14, the detection unit includes a single heart rate detector 14 that bears against the user's chest to detect the heartbeat. Claim 1 has been amended to recite that the wireless heart rate monitoring system according to the invention includes a single heart rate detector, rather than multiple heart rate detectors that might be part of an electrocardiogram (EKG) apparatus or other professional medical apparatus related to monitoring heart rate. Further, claim 1 is amended to make clear that the feature avoiding interference is directed to avoiding interference between electromagnetic waves carrying the heart rate information between respective transmitters at more than one detection unit according to the invention. This important feature of the invention is described in the patent application at pages 10 and 11 and particular attention is directed to the description in the paragraph beginning at page 10 in line 3.

Claim 3 is amended simply for clarity and greater precision and description.

New claim 11 is a combination of previously examined claims 1 and 3, with some clarifying amendments and without the amendments to claim 1 that are made here. New claims 12, 13, 14, and 15 are taken from and supported by claims 2, 4, 9, and 10, respectively.

Examined claims 1, 4, 9, and 10 were rejected as anticipated by Khair et al. (U.S. Patent 6,897,788, hereinafter Khair). This rejection is traversed as to the claims now pending.

Khair is directed to apparatus for sensing various biopotentials, such EKG measurements. In that apparatus a plurality of sensors, unlike the single heart rate detector of claim 1, are placed on the body of a patient. The sensors are wireless, meaning that each sensor includes a transmitter that transmits from the sensor to a common receiver, where the signals from each sensor are processed. Obviously, if all sensors are transmitting simultaneously, unless some very complex signal processing arrangement is provided in the receiver, potentially with coding of the sensor signals, it is impossible to unscramble the transmitted information.

Khair addresses the potential interference problem by time division multiplexing of signals from the wireless sensors 20 to the base unit 18. Khair also alludes to the use of code division multiple access communication format for the transmissions. The base unit 18 can transmit commands for the synchronization of the respective wireless sensor which, also include a receiver as well as a transmitter.

Khair cannot anticipate claim 1 nor any of the claims that depend from claim 1 for several reasons. For anticipation, of course, Khair must disclose all of the elements of the claimed invention.

As already pointed out, Khair never describes nor suggests a heart rate monitor that includes a single heart rate detector. In fact, a major portion of the disclosure of Khair relates to elimination of the usual large number of wired connections between a base unit and electrical potential sensors. Once those wired connections are eliminated by using wireless sensors, then the potential interference issue, to which so much of Khair is directed, arises. That interference issue between sensors does not arise in the invention as defined by claim 1 because the invention according to claim 1 includes only a single heart rate detector.

Applicant agrees that the invention according to claim 1 provides measures for preventing interference, but that interference is between multiple identical wireless heart rate monitoring systems according to the invention that are used in close proximity to each other. This problem will not occur in Khair because Khair describes professional medical apparatus that is likely to be used in a medical office or

hospital setting. If more than one such apparatus is in use, the apparatus will be separated by a sufficient distance to prevent interference. In fact, Khair does not even contemplate that kind of interference, showing that such interference is not an issue with his apparatus.

By contrast with the Khair apparatus, the invention is directed to a consumer product used by an individual, not a medical professional. In the example provided in the patent application, more than one person in a fitness center may use such an apparatus and those apparatuses may be in sufficiently close proximity to interfere with each other. It is the latter situation that the present invention avoids, as expressly described within claim 1. In other words, because of the express limitations in claim 1 regarding the single heart rate detector and the timing means for preventing interference between two of the described apparatus, Khair cannot anticipate that claim nor dependent claims 2-4, 9, and 10.

Claims 2 and 3, dependent claims, were rejected as unpatentable over Khair considered by itself. This rejection is respectfully traversed.

Claim 2 describes the means for attaching the heart rate detector as a strap. Claim 4 describes the display unit of the monitoring system as wrist-mountable. According to the admission at page 6 of the Office Action, neither feature is described by Khair. Instead, the limitations of claims 2 and 3 were dismissed as mere “design choices.” Applicant respectfully disagrees.

First, the rejection of claims 2 and 3 is founded upon the assertion that claim 1, from which each of claims 2 and 3 depend, is anticipated by Khair. Since there is no such anticipation, upon the withdrawal of the rejection of claim 1, the rejection of claims 2 and 3 must also be withdrawn.

Second, the only description in Khair concerning attachment of the sensors 20 to an individual seems to relate to Figure 1. There is no description of employing a strap or other kind of attachment mechanism that might fall within the scope of claim 2. Rather, Khair contemplates the conventional attachment of the sensors, presumably employing a gel or other intervening material between the body of the patient and

each sensor. Figure 1 of Khair makes clear that it is intended that the sensors can be arranged arbitrarily on the body of the patient, an arrangement that would be impossible if the multiple sensors were mounted n a strap. Likewise, a strap would never distribute those sensors over a wide area of the body of the patient.

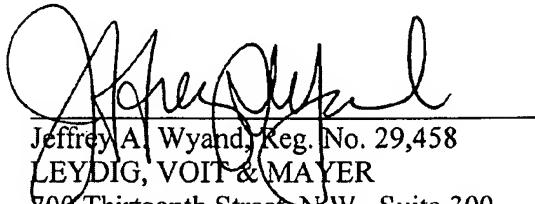
Finally, the dismissal of claim 2 as a “design choice” is improper because that dismissal does not rely on facts. Facts are required to establish *prima facie* obviousness, not dismissals. Upon reconsideration, the rejection should be withdrawn.

The concept that the display unit, like the monitor 14 in Khair, would be wrist-mountable as a mere design choice modification of Khair is not reasonable. The apparatus described by Khair collects complex electrical potential information from a plurality of sensors and displays, after processing, that information on what Khair describes as a monitor. As already stated, Khair is directed to apparatus for use by medical professionals. Providing a wrist-mountable monitor would be contrary to how such apparatus is used. Certainly, Khair includes no suggestion for such an arrangement. The dismissal of the limitation of dependent claim 3 as a design choice is not supported by anything in Khair nor anything other factual information in the Office Action. Accordingly, the rejection is erroneous and, upon reconsideration, the rejection of claim 3 should be withdrawn.

The foregoing comments regarding the rejection of claim 3 are equally applicable to new independent claim 11. Claim 11 likewise describes a monitoring system including a wrist-mountable display unit. In other words, new claim 11 and its dependent claims 12-15 are not described by or suggested in Khair so that those claims should be allowed.

Reconsideration and allowance of all claims now pending are earnestly solicited.

Respectfully submitted,



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